

Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.



THE

BOTANICAL GAZETTE

EDITOR

JOHN MERLE COULTER

VOLUME LI JANUARY-JUNE, 1911

WITH TWENTY-NINE PLATES AND FORTY-SEVEN FIGURES

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS

Published January, February, March, April, May, June, 1911

> Composed and Printed By The University of Chicago Press Chicago, Illinois, U.S.A.

TABLE OF CONTENTS

	PAGE
The origin and taxonomic value of the veil in	PAGE
Dictyophora and Ithyphallus (with plates	
I-VII and one figure) Geo. F. Atkinson	1
The affinities of Geinitzia gracillima (with plate	
VIII) Edward C. Jeffrey	2 I
Studies on the relation of the living cells to the	
transpiration and sap-flow in Cyperus. I	
(with one figure) James Bertram Overton	28
The anatomy of the sporeling of Marattia alata.	
Contributions from the Hull Botanical Labora-	
tory 142 (with plates IX-XII and three	
figures) Grace Miriam Charles	81
Studies on the relation of the living cells to the	
transpiration and sap-flow in Cyperus. II	
(with two figures) James Bertram Overton	102
Reduction by roots - Oswald Schreiner and M. X. Sullivan	121
Studies on the phloem of the dicotyledons (with	
plate XIII) Ansel F. Hemenway	131
Oenothera Lamarckiana: its early cultivation and	-3-
description E. J. Hill	136
The causes of vegetative cycles. Contributions	130
from the Hull Botanical Laboratory 143 - Henry C. Cowles	161
Studies on Jamaican Hymenophyllaceae (with	101
eight figures) Forrest Shreve	184
A wax seal method for determining the lower limit	104
of available soil moisture (with two figures)	
Lyman J. Briggs and H. L. Shantz	210
The temperature coefficient of the duration of life of	210
barley grains T. Harper Goodspeed	220
Alterations in heredity induced by ovarial treat-	220
ments (with plates XIV-XVI and three	
figures) D. T. MacDougal	0.4.5
Some features of the anatomy of the foliar bundle	241
(with plate XVII) Edmund W. Sinnott	258
Concurrent oxidation and reduction by roots	250
Oswald Schreiner and M. X. Sullivan	050
	²⁷³ ₂₈₆
The mode of chromosome reduction - Albert W. C. T. Herre	
The mode of chromosome reduction Reginald Ruggles Gates Filices Wilsonianae (with two figures) H. Christ	321
Two epiphytic algae (with plate YVIII)	345

The development of the spores of Pleurage zygo-	PAGE
spora (with plate XIX) I. M. Lewis	369
Notes on Ginkgo biloba (with plate XX) Walter W. Tupper	374
The origin of the chloroplasts in the cotyledons	0, .
of Helianthus annuus (with plate XXVI) - Edwin C. Miller	378
Cell and nuclear division in <i>Closterium</i> (with plates	٠.
XXII and XXIII and one figure) B. F. Lutman	401
The genus Evernia as represented in North and	•
Middle America R. Heber Howe, Jr.	431
Imbedded sexual cells in the Polypodiaceae (with	
plates XXVI and XXVII) Margaret C. Ferguson	443
An American Lepidostrobus. Contributions from	
the Hull Botanical Laboratory 144 (with	
plates XXVIII and XXIX) John M. Coulter and W. J. G. Land	450
Suggestions concerning the terminology of soil	
bacteria Jacob G. Lipman	454
Briefer Articles—	
Ergot on oats (with one figure) C. W. Warburton	64
Melchior Treub (with portrait) John M. Coulter	141
David Pearce Penhallow (with portrait) Edward C. Jeffrey	142
Notes on Funaria hygrometrica (with five	
figures) Jennie M. Speer	225
A portable, adjustable camera stand (with	
three figures) Harry B. Shaw	227
Homothallic conjugation in Rhizopus (with	
one figure) Florence A. McCormick	228
Pistillody of stamens in Hypericum nudiflorum Alfred Rehder	230
A convenient microtome knife (with five	
figures) Charles J. Chamberlain	298
Additions to the grasses of Cuba A. S. Hitchcock	300
Two sprouting conifers of the Southwest	
(with four figures) F. J. Phillips	385
Cell division in Lyngbya (preliminary note) William H. Brown	390
Note concerning the discovery of the nucleus W. Marquette	461
Nuclear phenomena in Puccinia podophylli Lester W. Sharp	463
CURRENT LITERATURE 65, 145, 232, 303, 392	, 465
For titles of book reviews see index under	
author's name and reviews	
Papers noticed in "Notes for Students" are	
indexed under author's name and subjects	

DATES OF PUBLICATION

No. 1, January 17; No. 2, February 16; No. 3, March 15; No. 4, April 17; No. 5, May 17; No. 6, June 19.

ERRATA

- P. 183, citation 29, for 51 read 52.
- P. 290, last line, for "a face of" read "face of a."
- P. 364, line 5, strike out (5).